

## ABSTRACT

It is an object of the invention to provide a substrate processing equipment that can predict a temperature of a substrate and easily control temperature of the substrate. Formed in a reactor (processing chamber) 3 are four temperature adjustment zones, of which setting and adjustment of temperature can be made by zone heaters 340-1 to 340-4. A temperature controller 4 mixes temperatures detected by inner thermocouples 302-1 to 302-4 and outer thermocouples 342-1 to 342-4 to calculate predicted temperatures of substrates by means of the first-order lag calculation on the basis of time constants of temperatures of substrates heated by the zone heaters 340-1 to 340-4. Also, the temperature controller 4 calculates electric power values (operating variables) for the zone heaters 340-1 to 340-4 with the use of predicted temperatures of substrates to output the same to the zone heaters 340-1 to 340-4.